

## EFFECT OF SOCIOECONOMIC TRAITS ON THE LEVEL OF KNOWLEDGE OF DAIRY FARMERS

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### ABSTRACT

*The present study aimed to access socio-economic profile of dairy farmers, their knowledge regarding management practices and relationship between them. The study was conducted in 20 randomly selected villages of Panhala Taluka of Kolhapur District of Maharashtra with 400 dairy farmers i.e. from each village 20 dairy farmers were selected. The data were collected through structured interview schedule during the year 2013. Out of total 45% respondents were educated up to secondary school level followed by higher secondary (25.75), primary (21.25), graduate (4.75) and illiterate (3.25) respectively. Majority of respondents were belonged to medium category in terms of age, family size, herd size, annual income, risk orientation, source of information and knowledge. Fifty nine per cent dairy farmers belonged to small size of land holding. Whereas, 89.50% had low level of social participation. Education, herd size, annual income, source of information highly significant correlation with knowledge and family size had highly significant but negative correlation with knowledge. Regarding age, land holding and social participation, it shows non-significant correlation with knowledge of dairy farmers. From such study, it may be concluded that source of information, risk orientation, education and annual income will lead to significant change in knowledge level of dairy farmers.*

**KEY WORDS:** Socioeconomic Profile, Knowledge, Coefficient of Correlation & Co-Operative Dairy Farmers

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### INTRODUCTION

Livestock rearing is an integral sub-sector of the agriculture in India. It provides livelihood activity for rural population, supporting agriculture in the form of critical inputs, contributing health and nutrition of the family, supplementing incomes, offering employment opportunities, and finally being a dependable “bank on hooves” in times of need. The dairy sector in India has grown substantially over the years, as a result of prudent policy intervention, India rank first among the world’s milk producing nations, achieving an annual output of 137.68 million tones of milk during the year 2013-14 as compared to 132.68 million tons in 2012-13, recording a growth of 3.96% (Annual Report Govt of India 2014-15). But as compared to individual animal milk production, we are far behind the other nations. The Indian dairy farming is basically a small holder production system, almost 70 per cent of milk producers in India are landless, small and marginal farmers characterized by milk production by the masses rather than mass milk production. These farmers maintain on an average a herd of only

1-3 cow/buffaloes milch animals comprising cow/buffaloes (Bhasin, 2012). The possible reasons behind the low milk production per animal are traditional management practices and lack or low level of knowledge about improved dairy management practices. Thus, knowledge of improved management practices is one of the important aspects, which influences livestock production. Tremendous research work has been done at different part of the country on the various aspects of scientific dairy management practices. Therefore, it is very important to survey rural areas in respect of scientific dairy practices followed by dairy farmers, which differ from region to region and district to district. Therefore, keeping this view in mind, present study was carried out with the objectives, to access the socio-economic profile, knowledge of dairy farmers and Correlation of socio-economic profile with knowledge of dairy farmers.

## METHODOLOGY

The present study was conducted in Panhala Taluka of Kolhapur district with dairy farmers of Shri Warana Co-operative Milk Producers Processing Federation Limited. There were 400 dairy farmers from twenty different villages and 20 dairy farmers from each village were selected randomly. Panhala Taluka was purposefully selected due to highest milk production amongst all eleven Talukas of Kolhapur district. The data were collected in local language, Marathi through personal interviews of the dairy farmers keeping in view the objectives of the study. Data were tabulated and total score obtained by each dairy farmer for all the questions calculated and analyzed, accordingly respondents were categorized in low, medium and high socio-economic profile and knowledge level. Ex-post Facto Research Design was used for the present study (Kerlinger, 1964).

## RESULTS AND DISCUSSIONS

**Table 1: Socio-Economic Profile of Dairy Farmers**

SR No	Variable	Category	Frequency	Percentage
1	Age	Young (upto 30 years)	72	18
		Medium (31 to 50 years)	260	65
		Old age (51 and above years)	68	17
		Mean	40.59	
2	Education	Illiterate	13	3.25
		Can read only	00	0.00
		Can read and write	00	0.00
		Primary school	85	21.25
		Secondary school	180	45
		Higher secondary school		
		Graduate	103	25.75
		Mean	19	4.75
			4.98	
3	Family size	Small family (upto 4 members)	66	16.50
		Medium family (5 to 8 members)	274	68.50
		Large family (9 and above members)	60	15.00
		Mean	6.47	
4	Herd size	Low (Upto 2 animals)	240	60
		Medium (3 to 5 animals)	132	33
		High (6 and above animals)	28	7
		Mean	1.9	
5	Land holding	Landless (No Land)	06	1.50
		Low (upto 2 acres)	236	59
		Medium (above 2 to 5 acres)	122	30.50
		High (above 5 acres)	36	9
		Mean	2.3	

Table 1: Contd.,				
6	Annual Income	Low (upto Rs.2,50,000)	257	64.25
		Medium (Rs.2,50,000 to 5,00,000)	97	24.25
		High (Above Rs. 5,00,000 to 7,50,000)	38	9.50
		Very high (Above Rs. 7,50,000 )	8	2
		Mean	2.7	
7	Risk orientation	Low (score upto 33)	309	77.25
		Medium (score 34 to 38)	91	22.75
		High (score 39 and above)	00	00
		Mean	22.91	
8	Social participation	Low (score upto 2)	369	92.25
		Medium (score above 2-4)	25	6.25
		High (score 5 and above)	6	1.25
		Mean	1	
9	Source of Information	Low (score up to17)	287	71.75
		Medium (score 18 to 22)	77	19.25
		High (score 23 and above)	36	9
		Mean	6.5	

### Socio-Economic Profile of Dairy Farmers

It was observed from table 1, majority of dairy farmers (65.00%) belonged to middle (31 to 50 years) age followed by young (upto 30 years) age (18 per cent) and older (51 and above years) age respectively. Forty five percentages of dairy farmers were having secondary education, followed by, higher secondary (25.75%), primary (21.25%), graduate (4.75%) and illiterate (3.25%), respectively. About 68.50 per cent of dairy farmers were from medium family (5 to 8 members), 16.50 per cent were from small family (upto 4 members) and only 15.00 per cent of dairy farmers were from large family (9 and above members). The reason behind highest percentage of medium family size may be attributed to the traditional social structure. Earlier, Deshmukh and Dakhore (2005) revealed that highest percentage (43%) of dairy farmers belonged to middle age category, 36% of dairy farmers were educated upto primary level and highest percentage (50%) were having medium category of family size. Nishi and Saha (2011) reported 70% dairy farmers were belonging to middle age group, 42.50% of dairy farmers were having education upto secondary education.

Most of the dairy farmers (53%) possessed 3-5 dairy animals (medium herd) followed by up to 2 animal and large herd above 6 animals (11.25 %), respectively on the score card basis ( small herd- upto 2 number of dairy animals, medium herd 3 to 4 dairy animals and large herd 5 and above dairy animals), The highest percentage of dairy farmers possessing medium herd may be indicative of the fact that it might be due to small land holding coupled with scarcity of green fodder round the year. Fifty nine per cent of dairy farmers belonged to small land holding, followed by medium (30.5 %), and large land holding (9%), the overall percentage of small and medium land holders were more, the reason for this might be due to hereditary fragmentation land holding decreased. Present observations are in agreement with the results of, Senthilkumar (2006) and Rakshe (2002), respectively.

Regarding annual income, the majority of dairy farmers belongs to medium and high income group (53.50% and 24.00 %), which might attributed to the major share of income coming from dairy business coupled with agricultural farming as per study. The dairy farmers have also expressed the similar feeling of improved economic status. Accepting the challenges and dared decisions of adopting new technological innovations regarding the dairy animal management practices were the results of medium to high risk orientation categories observed (87.50% and 3.00 %) which may be attributed to the medium to high annual income of selected dairy farmers coupled with knowledge and level of adoption. About 89.50 % of dairy farmers belonged to the category of low social participation followed by 10.50 %

medium and zero per cent were from high category. The highest percentage observed for medium category of source of information may be due to the organizing livestock campaigns, tours, kisan call centers, exhibition, and strong network of technical and field staff of Shri Warana Co-op M.P.P.F.Ltd. These findings are in consonance with Saha and Akand (2010), Lawrence and Ganguli (2012), Sawant and Siddiqui (2003) and Latha (2004) respectively.

### Knowledge Level of Dairy Farmers about Improved Management Practices

**Table 2: Knowledge Level of Dairy Farmers**

Sr. No.	Category	Frequency	Per cent
1.	Low knowledge(score upto 60)	82	20.50
2.	Medium knowledge (score 61 to 69)	222	55.50
3.	High knowledges (score 70 and above)	96	24.00
	<b>Total</b>	<b>400</b>	<b>100.00</b>

X = 64.04 SD = 7.46

Knowledge is one of the important factors that influences on adoption of recommended practices. The adoption of any practice depends upon accurate and up to date knowledge a person has about it. It was observed from Table 2 that majority (55.50 %) dairy farmers were having medium knowledge level whereas, 24.00 per cent dairy farmers had high knowledge level and 20.50 per cent dairy farmers possessed low knowledge level.. The majority of the farmers had medium to high level of knowledge may be indicative of the fact that education level, use of sources of information and experience combined with co-operative dairy business might had played a pivotal role in upgrading their knowledge level regarding the dairy animal management practices. Similar findings have been noticed by Shinde (2002) Deshmukh and Dakhore (2005), Sharma and Singh (2009). And whereas, contradictory results were noticed by Saha and Akand (2010).

### Correlation Coefficient between Independent Variables with Dependant Variable Knowledge of Dairy Farmers

**Table 3: Correlation Coefficient between Independent Variables with Dependant Variable Knowledge of Dairy Farmers N=400**

SR. No	Independent Variables	Coefficient of Correlation Knowledge (r)
1.	Age	0.177 NS
2.	Education	0.544**
3	Family size	-0.364**
4.	Herd size	0.473**
5.	Land holding	-0.137 NS
6.	Annual income	0.446**
7.	Risk orientation	0.693**
8.	Social participation	-0.141NS
9.	Source of information	0.614**

\*\* P < 0.01 \* P < 0.05 NS = non-significant

It was observed from table 3. that age of the dairy farmers and knowledge level of management practices found negative non significant (r = -0.177). Age didn't show any significant association with the knowledge of dairy management practices. Similar results have been reported by Arora *et al.* (2006) and we completely agree with them.

Education plays key role in success of any enterprise, in present study also findings show that education has positive and highly significant (P<0.01) correlation with knowledge. Similar finding were observed by Arora *et al.* (2006) and Rajput (2007),

The present findings elucidate that family size and annual income shows negative but highly significant correlation with level of knowledge of dairy farmers. It means family size and annual income does not play any significant role in the changing knowledge level of dairy farmers. The similar findings were observed in the study by Rajput (2007) and Kharwadkar and Siddiqui (2008). Panchabhai and Siddiqui (2008) reported that correlation coefficient of age (0.109), education (0.331), family size (0.095), herd size (0.270), land holding (0.137), annual income (0.127), risk orientation (0.270), social participation (0.154) and source of information (0.248) which was in contrast with the present study.

It was found that herd size had positive and highly significant ( $P < 0.01$ ) correlation with knowledge. Similar results have been reported by Rajput (2007) and Saha and Akand (2010).

Risk orientation has positive and highly significant correlation with knowledge which might be due to advance payments given by the Warana dairy, subsidies on purchase of dairy animals and loan with minimum interest given by Warana dairy co-operative MPPF Ltd. These results were similar with the findings of Sharma and Singh (2009).

The study revealed that Land holding and social participation shows negative and non-significant correlation with knowledge which might be due to better agricultural facilities in Panhala taluka like irrigation, productive soil and favorable climate and better marketing of agricultural products. Similar, findings were observed by Kharwadkar and Siddiqui (2008).

Source of information is important aspect, it helps in increasing the knowledge level of dairy farmers which leads to final adoption of a improved management practices. The study reveals that source of information has positive and highly significant correlation with knowledge, which was possible due to efforts of warana co-operative dairy in providing information about improved dairy management practices through arranging health camps, demonstration camps, Livestock show, dairy show, trainings for entrepreneurs. These findings are similar as reported by Sharma and Singh (2009).

The negative non-significant to highly significant correlation coefficient of independent variables viz; age, family size, land holding and social participation with the knowledge of dairy farmers proved the fact beyond doubt that these are the limiting factors in gaining the knowledge of dairy animal management practices.

## **CONCLUSIONS**

It may be concluded that the highly significant positive correlation coefficient of education, herd size, annual income, risk orientation and source of information with knowledge level of dairy animal management practices may lead to conclusion that these socio-economic independent variables play a pivotal role in increasing the knowledge of dairy farmers of Shri Warana Co-op M.P.P.F.Ltd.

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